

REMARKS

[0002] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 5, 6 and 49 are previously canceled.
- Claims 1, 17, 20, 27, 28, 32, 42-48, 50 and 51 are amended herein.
- Claims 58 and 59 are added herein.
- Claims 1-4, 7-48 and 50-59 are currently pending.

[0003] Support for the amendments to claims 1, 20, 32, 42 and 47 is found in the specification at least at paragraphs [0011], [0012], [0029], [0031], [0066] and [0082]. Claims 17, 27, 28, 43-46 and 48 are amended to address minor informalities.

[0004] Support for new dependent claims 58 and 59 is found in the specification at least at paragraph [0030]. Applicant submits that new claims are allowable at least because they depend from allowable base claims.

Claims 42-48, 50 and 51 Recite Statutory Subject Matter Under § 101

[0005] Claims 42-48, 50 and 51 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Applicant respectfully traverses this rejection.

[0006] Nevertheless, for the sole purpose of expediting prosecution and without commenting on the propriety of the Office's rejections, Applicant herein amends claims 42-48 and 51 as shown above. Applicant respectfully submits that these amendments render the § 101 rejection moot.

Cited Documents

[0007] The following documents have been applied to reject one or more claims of the Application:

- **Subramanian: Subramanian, et al.**, U.S. Patent Application Publication No. **2005/0018775**
- **Griffits: Griffits, et al.**, U.S. Patent No. **6,262,776**
- **Markowitz: Markowitz, et al.**, U.S. Patent No. **6,457,052**

Claims 1-4, 7-48 and 50-57 Are Non-Obvious Over Subramanian, Griffits and Markowitz

[0008] Claims 1-4, 7-48 and 50-57 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Subramanian in view of Markowitz. Applicant respectfully traverses the rejection.

Amended Independent Claim 1

[0009] Applicant submits that the Office has not made a *prima facie* showing that independent claim 1 is obvious in view of the combination of Subramanian, Griffits and Markowitz. Applicant submits that the combination of Subramanian, Griffits and Markowitz does not teach or suggest at least:

- taking the corrective action by the second component in response to the requesting, the second component comprising one of at least three components of the pipeline that are configured to take the corrective action in response to the requesting.

[0010] Applicant respectfully submits that the combination of Subramanian, Griffits and Markowitz does not teach or suggest “at least three components of the pipeline that

are configured to take the corrective action in response to the requesting,” as recited in this claim, as amended.

[0011] Regarding the claimed “components of the pipeline that are configured to take the corrective action”, the Office relies on Subramanian, indicating the following (Office Action, p. 3, emphasis added):

Subramanian et al. also discloses that the time stamp management can be managed by either **the video decoder or the display manager**, thereby meaning that the second component is selected from a group comprising **multiple components of the pipeline that are configured to take the appropriate action** (paragraphs [0047]-[0074])

[0012] Regarding the video decoder and the display manager, referenced in the passage above, Subramanian describes the following in paragraphs [0049] and [0058], shown here in pertinent part for convenience (emphasis added):

[0049] The video decoder 230 can compare the PTS value of every B-picture 121 (note that the PTS and DTS values of B pictures are the same) provided for decoding to the current STC value. **If the PTS value and the STC value differ by more than a predetermined threshold, the video decoder 230 drops the B-picture 121 without decoding.**

....

[0058] ... the display manager 245 selects (410) the topmost entry in the FIFO queue 240, and extracts (415) the first element out of that entry and **inspects various parameters** like the PTS, PCR offset, corresponding to that element and extraneous parameters like the STC value, and parity of the Vsynch. **The display manager 245 tests and compares and determines (420) whether the just considered element qualifies for display following the Vsynch or not.**

[0013] As an example, Subramanian does not teach or suggest “at least three components of the pipeline ... configured to take the corrective action,” as recited in this claim, as amended. In contrast, as shown above, Subramanian merely describes two components that take action: 1) the “video decoder [that] drops the B-picture ... without decoding” and 2) the “display manager [that] ... determines ... whether the ... element

qualifies for display.” Thus, Subramanian does not teach or suggest the currently claimed “three components ... configured to take the corrective action” because Subramanian merely describes two components, the “video decoder” and the “display manager”.

[0014] As another example, Subramanian does not teach or suggest “components of the pipeline that ... take the corrective action in response to the requesting,” as recited in this claim, as amended. In contrast, as shown in the passages above, Subramanian describes that “the video decoder ... drops the ... picture ... without decoding” based on values that “differ by more than a predetermined threshold” and not “in response to the requesting,” as currently claimed. Additionally, as shown above, Subramanian describes that the display manager determines whether an “element qualifies for display” by “inspecting various parameters” and not “in response to the requesting” as also currently claimed. Thus, Subramanian does not teach or suggest the currently claimed “components of the pipeline that ... take the corrective action in response to the requesting” because Subramanian does not discuss or describe that the “video decoder” or the “display manager” take action “in response to ... requesting,” as currently claimed.

[0015] Applicant submits that neither Griffiths nor Markowitz make up for the deficiencies of Subramanian because the combination of these cited references does not teach or suggest “at least **three components** of the pipeline that are configured to take the corrective action in response to the **requesting**,” as recited in this claim, as amended (emphasis added). Therefore, the combination of the cited references are silent regarding both the currently claimed features of the “at least three components”

and the “requesting.” Thus, on at least this basis, Applicant submits that the combination of the cited references does not render this claim obvious.

[0016] Consequently, the combination of Subramanian, Griffiths and Markowitz does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 2-4, 7-19 and 52-54

[0017] Claims 2-4, 7-19 and 52-54 ultimately depend from independent claim 1. As discussed above, claim 1 is allowable over the cited documents. Therefore, claims 2-4, 7-19 and 52-54 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Amended Independent Claim 20

[0018] Applicant submits that the Office has not made a *prima facie* showing that independent claim 20 is obvious in view of the combination of Subramanian, Griffiths and Markowitz. Applicant submits that the combination of Subramanian, Griffiths and Markowitz does not teach or suggest at least:

- the component comprising one of at least three components of the multi-component pipeline that are configured to take the corrective action in response to a request

[0019] In the rejection of multiple “components of the multi-component pipeline that are configured to take the corrective action,” as recited in this claim, the Office relies on Subramanian. Without needlessly repeating the reasons presented in support of claim 1, Applicant submits that Subramanian does not teach or suggest “at least three

components ... that are configured to take the corrective action in response to a request.” In short, Subramanian merely describes two components: 1) a video decoder and; 2) a display manager, and not the currently claimed “at least three components.” Additionally, Applicant submits that neither the video decoder nor the display manager described by Subramanian, “take the corrective action in response to a request,” as currently claimed. Instead, they make decisions by “comparing values to a threshold” or “examination of parameters,” as shown in the reasons presented above in support of claim 1. Thus, Subramanian does not teach or suggest the currently claimed features of the “at least three components” and the “request.”

[0020] Applicant submits that neither Griffiths nor Markowitz make up for the deficiencies of Subramanian, because the combination of Griffiths and Markowitz does not teach or suggest “at least **three components** ... configured to take the corrective action in response to a **request**,” as currently claimed (emphasis added). Thus, at least on this basis, the combination of the cited references does not render this claim obvious.

[0021] Consequently, the combination of Subramanian, Griffiths and Markowitz does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 21-31 and 55-57

[0022] Claims 21-31 and 55-57 ultimately depend from independent claim 20. As discussed above, claim 20 is allowable over the cited documents. Therefore, claims 21-31 and 55-57 are also allowable over the cited documents of record for at least their

dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Amended Independent Claim 32

[0023] In light of the amendments presented herein, Applicant submits that the rejection of independent claim 32 is moot. Specifically, the combination of Subramanian, Griffiths and Markowitz does not teach or suggest at least:

- the at least one of the sample processing components comprising one of at least three sample processing components of the pipeline that are further configured to receive and process a request from the quality manager to take the corrective action and further configured to relay timing information regarding samples of the presentation to the quality manager to facilitate monitoring of the sample processing times in the pipeline, wherein the quality manager determines the corrective action ...

[0024] The Office has not previously considered the newly amended features of this claim and has not cited Subramanian, Griffiths or Markowitz, alone or in combination, for these newly amended features. Regarding the claimed “sample processing components of the pipeline ... configured to ... take the corrective action,” the Office relies on Subramanian (Office Action, p. 25).

[0025] In contrast, Subramanian describes the following in paragraphs [0039], [0043], [0045], [0049] and [0058], shown here in pertinent part for convenience (emphasis added):

[0039]... The index table buffer 225 comprises records of start codes and the address in the compressed data buffer 220 storing the start code. Additionally, **the PTS and PCR_Offset are embedded in the index table buffer 225 with non-slice start code entries** (start codes for entries at higher levels than the start code).

....

[0043]... When the **video decoder** 230 receives a picture 121 from the compressed data buffer 220, the corresponding **index buffer table 225 entry** associated with the picture 121 **is also extracted and parsed**. ...

[0045] The **display manager 245** is driven by the **vertical synchronization pulse Vsynch, in an interrupt drive manner. ...**

....

[0049] The **video decoder 230** can compare the PTS value of every B-picture 121 (note that the PTS and DTS values of B pictures are the same) provided for decoding to the current STC value. **If the PTS value and the STC value differ by more than a predetermined threshold, the video decoder 230 drops the B-picture 121 without decoding.**

....

[0058] ... the **display manager 245** selects (410) the topmost entry in the FIFO queue 240, and extracts (415) the first element out of that entry and **inspects various parameters** like the PTS, PCR offset, corresponding to that element and extraneous parameters like the STC value, and parity of the Vsynch. **The display manager 245 tests and compares and determines (420) whether the just considered element qualifies for display following the Vsynch or not.**

[0026] Subramanian does not teach or suggest “at least three sample processing components of the pipeline that are each configured to receive and process a request from the quality manager to take the corrective action and configured to relay timing information ... to the quality manager ... wherein the quality manager determines the corrective action,” as recited in this claim, as amended.

[0027] In contrast, as shown in the passages above, Subramanian describes that the “display manager ... inspects various parameters ... and determines ... whether the just considered element qualifies for display following the Vsynch.” Subramanian further describes, as shown in the passages above, that the “video decoder ... can compare the PTS value of every B-picture If the PTS value and the STC value differ by more than a predetermined threshold, the video decoder ... drops the B-picture.”

[0028] Subramanian does not teach or suggest the features of the claimed “sample processing components of the pipeline,” because neither the “video decoder” nor the “display manager” described by Subramanian “are ... configured to receive and process

a request from the quality manager to take the corrective action and ... configured to relay timing information ... to the quality manager,” as recited in this claim, as amended. In contrast, the “video decoder” and the “display manager” process parameters or values to determine whether to drop or not display a B-picture, not based on the currently claimed “request from the quality manager.” Furthermore, as shown above, neither the “video decoder” nor the “display manager” described by Subramanian “relay timing information ... to the quality manager,” as recited in this claim, as amended. Instead, as shown above, Subramanian describes that the “video decoder” and the “display manager” process received variables or parameters to make decisions. Subramanian is silent regarding the currently claimed “relay [of] timing information ... to the quality manager.”

[0029] Applicant submits that neither Griffiths nor Markowitz, alone or in combination, make up for the deficiencies of Subramanian, because the combination of Griffiths and Markowitz also does not teach or suggest “at least three sample processing components of the pipeline that are ... configured to receive and process a request from the quality manager to take the corrective action and ... configured to relay timing information ... to the quality manager ... wherein the quality manager determines the corrective action,” as recited in this claim, as amended. Thus, on at least this basis, the combination of the cited references does not render this claim obvious.

[0030] Consequently, the combination of Subramanian, Griffiths and Markowitz does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 33-41

[0031] Claims 33-41 ultimately depend from independent claim 32. As discussed above, claim 32 is allowable over the cited documents. Therefore, claims 33-41 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Independent Claims 42 and 47

[0032] In light of the amendments presented herein, Applicant submits that the rejection of independent claims 42 and 47 are moot.

[0033] Applicant submits that the combination of Subramanian, Griffiths and Markowitz does not teach or suggest at least the following feature of claim 42:

- wherein the first and second components comprise two of at least three components of the pipeline that are configured to take the corrective action.

[0034] Applicant also submits that the combination of Subramanian, Griffiths and Markowitz does not teach or suggest at least the following feature of claim 47:

- wherein the at least one component comprises one of at least three components of the pipeline that are configured to take the corrective action.

[0035] In contrast, without needlessly repeating the reasons presented in support of claim 1, Subramanian merely describes that a “**display manager** 245 primarily does the time stamp management, although the **video decoder** 230 can also do a portion” (Subramanian, paragraph [0047], emphasis added). Applicant respectfully submits that 1) a display manager; and 2) a video decoder are not analogous to the claimed “at least

three components of the pipeline that are configured to take the corrective action,” because the display manager and the video decoder are not “at least three components,” as recited in these claims.

[0036] Applicant submits that Griffiths does not make up for the deficiencies of Subramanian. In contrast, Griffiths describes that “the video decoder filter 216 is able to make such decisions (i.e., drop the frame or decode the frame) based upon messages or signals, preferably called quality messages, being sent from the video renderer filter 218 “downstream” of the video decoder 216.” (Griffiths, Col. 12, lines 41-45). Applicant respectfully submits that the video decoder filter is not analogous to the claimed “at least three components,” because this filter is merely a single entity and not “at least three components,” as recited in these claims.

[0037] Applicant submits that Markowitz does not make up for the deficiencies of Subramanian and Griffiths. In contrast, Markowitz merely describes that “a buffer at the user’s computer must be filled with the first few seconds of content so that streaming can begin. ... When network congestion starts to occur, subsequently transiting packets associated with the segments are dropped; consequently, the video/audio content is presented to the user with reduced quality” (Markowitz, Col. 1, lines 40-46). Applicant respectfully submits that the buffer, as described by Markowitz, is not analogous to the claimed “at least three components” because this buffer is merely a single entity and not “at least three components,” as recited in these claims.

[0038] Moreover, there is no motivation or suggestion in any of the cited documents that components from Subramanian, Griffiths or Markowitz could be aggregated to arrive at the currently claimed “at least three components.”

[0039] Therefore, the combination of the cited references does not teach or suggest “at least three components of the pipeline that are configured to take the corrective action,” as recited in these claims. Thus, at least on this basis, the combination of the cited references does not render these claims obvious.

[0040] The combination of Subramanian, Griffiths and Markowitz does not teach or suggest all of the elements and features of these claims. Accordingly, Applicant respectfully requests that the rejection of these claims be withdrawn.

Dependent Claims 43-46, 48 and 50-51

[0041] Claims 43-46, 48 and 50-51 ultimately depend from one of independent claims 42 and 47. As discussed above, claims 42 and 47 are allowable over the cited documents. Therefore, claims 43-46, 48 and 50-51 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Conclusion

[0042] For at least the foregoing reasons, all pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application.

[0043] If any issues remain that would prevent allowance of this application,

Applicant requests that the Examiner contact the undersigned representative before issuing a subsequent Action.

Respectfully Submitted,

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